REMARKS

Claims 1 through 13 and new Claim 14 are pending in the application. Applicants anticipate, and accordingly acknowledge with gratitude, that Claims 6 and 7 will be allowed upon submission of a terminal disclaimer. Claim 1 has been added to clarify that the entirety of the particles contained within the films of the invention fall within the recited median grain diameters (d_{50}) and spread of the distribution of the grain size. Claim 14 has been added to complete the record for examination and to highlight specific advantageous embodiments of the invention.

Applicants respectfully submit that this response does not raise new issues, but merely places the above-referenced application either in condition for allowance, or alternatively, in better form for appeal. Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

Claim Objections

Claims 8 and 9 have been amended to correct typographical errors kindly noted by the Examiner, thereby obviating these objections.

Double Patenting Rejections

Claims 1 through 13 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting in light of copending Application No. 10/077,454 in view of Ullmann's Encyclopedia of Industrial Chemistry. Solely to advance prosecution of the case and without addressing the merits of the rejection, Applicants respectfully submit herewith a terminal disclaimer, as suggested by the Examiner. More particularly, Applicants submit herewith a terminal disclaimer to be charged to Deposit Account 50-2193 that disclaims the terminal part of any patent

granted on the above-identified application extending beyond the expiration date of the full statutory term which may ultimately result from the cited copending application, i.e. Application No. 10/077,454.

Rejection Under 35 USC § 103

Claims 1 through 5 and 8 through 13 stand rejected under 35 USC 103(a) as unpatentable over United States Patent No. 5,955,181 ("the '181 patent") to Peiffer et al. in view of United States Patent No. 4,818,581 to Katoh et al ("the '581 patent") or United States Patent No. 5,077,118 to Hasegawa et al. (" the '118 patent").

It may be useful to consider the invention as recited in the claims before addressing the merits of the rejection. The claims recite multilayer, transparent, biaxially oriented polyester packaging films having at least one the transparent, high gloss outer layer (A) that further comprise a single pigment system having a median grain diameter (d_{50}) in the range from 1.5 to 5 μm and a spread of the distribution of the grain size, expressed by the SPAN 98, of less than or equal to 1.9. In particularly advantageous embodiments, the multilayer films include two transparent, high-gloss outer layers (A) and (C), that both contain a pigment system having a median grain diameter (d_{50}) in the range from 1.5 to 5 μm and a spread of the distribution of the grain size, expressed by the SPAN 98, of less than or equal to 1.9, as recited in Claim 14. Typical particle systems include a range of conventionally shaped particles having the recited particle size and grain size distribution, including calcium carbonate, amorphous silica, and the like.

Applicants have determined a beneficial combination of ranges of particle diameters, particle concentrations and diameter spread for pigment systems that impart an advantageous combination of gloss, haze and windability to the resulting film. More specifically, Applicants have determined beneficial particle concentration and/or particle size ranges providing desirable optical properties, e.g. transparency and gloss, while further imparting runnability. Applicants have further determined that a smaller spread within the median particle diameter results in a more uniform thickness of air layer between the laps of film, reducing the tendency of the film to block. By combining the

beneficial recited ranges, Applicants have produced films exhibiting a highly advantageous balance of properties. Films outside the claimed ranges would not be expected to provide the beneficial balance of properties exhibited by the films of the invention. For example, if the outer layer (A) includes a pigment system in which the median diameter is smaller than 1.5 micron and the spread is greater than 1.9, both winding and optical properties, such as transparency and gloss, are impaired. Such films also have a tendency toward telescoping or off-center winding of the rolls.

Applicants respectfully submit that Peiffer does not teach or suggest the claimed invention. In fact, Peiffer teaches away from the tailored pigments systems of the claimed invention. Rather than altering pigment systems, Peiffer addresses the slip and optical issues that have historically been associated with heat sealable films (such as packaging films) by adjusting the base polymer composition. (Col. 2, lines 45 through 49) More specifically, Peiffer discloses coextruded heat-sealable films containing ethylene 2,6-naphthalene copolymer in at least one of the heat sealable layers. (Col. 3, lines 45 through 50 and Col. 5, lines 11 through 13). The ethylene 2,6-napthalene copolymer is said to improve both the optical properties and the tendency of the resulting film to stick. (Col. 3, lines 29 through 33). Peiffer merely makes a general reference to the incorporation of additives, broadly noting that "the base layers and the outer layer(s) may, if necessary, also contain conventional additives, such as ... antiblocking agents." (Col. 6, lines 49 through 51).

Accordingly, Applicants respectfully submit that Peiffer, considered either alone or in combination with the art of record, does not teach or suggest the recited multilayer films having at least one outer layer (A) that includes from 0.05 to 0.5% by weight of a single pigment system consisting essentially of a median grain diameter (d_{50}) that is in the range from 1.5 to 5 μm and the spread of the distribution of the grain size, expressed by the SPAN 98, is less than or equal to 1.9

Applicants further respectfully submit that there would have been no motivation to have combined the cited references. Applicants respectfully reiterate that merely because the references can be combined is not enough, there must still be a suggestion. MPEP 2143.01 (section citing Mills). However, even if combined (which Applicants submit should not be done), the secondary references do not cure the deficiencies within Peiffer.

Kato is primarily directed to magnetic tapes having improved drop out properties. To decrease the number of dropouts, Kato incorporates uniquely shaped silica, i.e spherical silica, into monolayer films. Kato asserts that the shape of a particular protrusion affects film performance and that silica having a shape close to a true sphere improves drop out performance. This spherical silica is "markedly different" from conventional silica particles. (Col. 5, lines 12 through 15). Kato's spherical silica is said to decrease void formation during film production because the stresses around the particles, which are extremely close to true spheres, is not concentrated locally. (Col. 9, lines 48 through 56). Kato further notes that in precision applications, such as magnetic tapes, larger particles can cause dropouts. (Col. 1, lines 45 through 49). Kato thus recommends the use of fine particles, such as particles as fine as 0.05 micron in diameter. (Col. 4, lines 47 through 49). Kato further recommends the inclusion of such particles in amounts of up to 4 weight percent. (Col. 3, line 16).

Kato, considered alone or in combination with the art of record, does not teach or suggest the claimed pigment systems, which are formed from conventionally shaped particles, and which further exhibit a median grain diameter ranging from about 1.5 to 5 microns, and particularly not such conventional particles further having a distribution of grain size less than or equal to 1.9. The Office Action asserts that the phrase "consisting essentially of" in the present claims does not restrict the composition of the film as a whole. Applicants respectfully submit that the presence of fine silica, such as Kato's 0.05 micron silica, would be expected to materially affect the basic and novel characteristic(s) of the claimed films. More particularly, Applicants would expect such fine diameter silica to have a detrimental impact on the optical properties of the recited transparent, high-gloss outer layer (A). However, out of an abundance of caution, Applicants have clarified that the entirety of particles within the claimed invention fall within the recited grain diameters and distribution of grain size. Applicants have found that the recited pigment systems, possessing a combination of ranges of particle diameters, particle concentrations and diameter spread, impart an advantageous combination of optical properties, i.e gloss and haze, to the resulting film, and windability to the resulting film.

In addition, Kato, directed to monolayered films, certainly does not teach or suggest the three layered films of Claim 14, having outer layers which both include the recited pigment system.

Hasegawa is similarly directed to films incorporating spherical silica. In fact, Hasegawa is directed to films incorporating a mixture of spherical silica. Hasegawa likewise expressly notes that his "spherical silica particles are drastically different from conventional silica particles." (Col. 4, lines 65 through 66). Hasegawa similarly believes that the improved transparency of his films is due to the unique shape of the spherical silica. (Col. 7, lines 41 through 48). Hasegawa specifically requires the inclusion a mixture of extremely fine diameter spherical silica, i.e. silica exhibiting diameters ranging from about 0.03 to 0.3 microns, along with larger silica. (Col. 5, lines 5 through 10). In fact, Hasegawa teaches the inclusion of greater amounts of extremely fine diameter silica than larger silica. (Col. 3, lines 22 through 33 and Examples 1 through 9).

Hasegawa, considered alone or in combination with the art of record, does not teach or suggest the claimed pigment systems, which are formed from conventionally shaped particles. Hasegawa, requiring the inclusion of extremely fine diameter spherical silica, certainly does not teach or suggest the recited pigment systems consisting essentially of a median grain diameter ranging from about 1.5 to 5 microns, particularly not such conventional particle systems further having a distribution of grain size less than or equal to 1.9. In fact, Hasegawa teaches away from the beneficial claimed pigment systems by employing such extremely fine silica as the majority of his silica mixture. Again, Applicants respectfully submit that the presence of extremely fine silica, such as Hasegawa's 0.03 to 0.3 micron silica, would be expected to materially affect the basic and novel characteristic(s) of the claimed films, particularly the recited transparent, high-gloss outer layer (A). However, out of an abundance of caution, Applicants have clarified that the entirety of particles within the claimed invention fall within the recited grain diameters and distribution of grain size, as noted above.

In addition, Hasegawa, directed to monolayered films, certainly does not teach or suggest the coextruded three layered films of Claim 14, having outer layers which both include the recited pigment system.

There would have been no motivation to have combined these references. Applicants respectfully reiterate that merely because the references can be combined is not enough, there must still be a suggestion. MPEP 2143.01 (section citing Mills).

However, even if the cited references were combined (which Applicants submit should not be done), the claimed invention would not result. Peiffer teaches the use of particular co-polymers to address issues associated the heat sealable films. (Col. 2, lines 45 through 49). Both Kato and Hasekawa disclose the use of additives having a unique shape, i.e. spherical silica, within magnetic tape and stamping films, respectively. Kato and Hasekawa further disclose the use of much smaller additive particles. For example, Kato notes the use of silica as small as 0.05 microns. Hasekawa requires the majority of his spherical silica mixture to have a diameter ranging from about 0.03 to 0.3 microns. Kato further teaches the inclusion of spherical silica in amounts of up to 4 weight percent. Consequently, none of the art of record, considered either alone or in combination, teaches or suggests the recited particle systems, formed from conventionally shaped particles, consisting essentially of a median grain diameter ranging from about 1.5 to 5 microns, much less such particle systems further having a distribution of grain size less than or equal to 1.9. Further, neither Peiffer, Kato or Hasekawa teaches or suggests the coextruded, three layered films of Claim 14, having outer layers which both include the recited pigment system. Accordingly, Applicants respectfully submit that the claimed invention is patentable in light of the art of record, considered either alone or in combination.

CONCLUSION

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1 through 13 and new Claim 14 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional fees are necessary to allow consideration of this paper, the fees are hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

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Klaus Schweitzer
See attached Limited Recognition
Under 37 CFR§10.9(b)

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